REMARKS

This Amendment is in response to an Office Action mailed December 8, 2006. In the Office Action, claims 2-11 and 13-34 were rejected under 35 U.S.C. §103(a). Applicants respectfully traverse all of the §103(a) rejections and respectfully request the Examiner to reconsider the allowability of these claims. Claims 2-3, 6-7, 10 and 13-17 have been amended.

Request for Examiner's Interview

The Examiner is respectfully requested to contact the undersigned attorney if after review, such claims are still not in condition for allowance. This telephone conference would greatly facilitate the examination of the present application. The undersigned attorney can be reached at the telephone number listed below.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 7 was rejected under 35 U.S.C. §112, second paragraph. Based on the amendments set forth above, withdrawal of the outstanding §112 rejection is respectfully requested.

Rejection Under 35 U.S.C. § 103

A. §103 REJECTION OF CLAIMS 10, 12-16, 18-20, 22, 24 AND 29

Claims 10, 13-16, 18-20, 22, 24 and 29 were rejected under 35 U.S.C. §103(a) as being unpatentable over Beach (U.S. Patent No. 6,067,297) in view of Chesson (U.S. Published Application No. 2002/0045428). Applicant respectfully traverses the rejection because a *prima facie* case of obviousness has not been established.

As the Examiner is aware, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. *See MPEP §2143; see also In Re Fine, 873 F. 2d 1071, 5 U.S.P.Q.2D 1596 (Fed. Cir. 1988).* Herein, the combined teachings of the cited references fail to describe or suggest all the claim limitations.

With respect to independent claims 10 and 15, Applicants respectfully disagree that Beach does not disclose the modified beacon including a plurality of information elements such as, for example, an access point name considered to be the AP_ID set forth see col. 11, lines 3 of Beach. The AP_ID is information *within the Probe frame* from an MU, and is not information within the modified beacon provided by the EAP. *Emphasis added.*

Moreover, Applicants agree with the Examiner that <u>Beach</u> does not teach a first frame check sequence or load balancing information with a modified beacon broadcast by the AP. However, Applicants respectfully disagree with the Examiner that <u>Chesson</u> teaches these claim limitations. Rather, <u>Chesson</u> teaches a beacon with load assignment information. In other words, <u>Chesson</u> teaches a beacon that directs nodes *when to use particular timeslots* in order to attempt to optimize communications between that AP and a set of nodes. *Emphasis added.* The time slot assignments identified by elements 528 do not constitute "load balancing information" as claimed. In particular, the data slots 528 do not constitute information pertaining to characteristics of the plurality of wireless units for use by the plurality of wireless units to determine whether to establish communications with the access point.

Finally, in contrast with the Examiner's contention, <u>Beach</u> does not specifically disclose the first frame check sequence (FCS), which alleged constitutes the CRC utilized in MAC frames as outlined on col. 12, line 54 through col. 13, line 4. First, the CRC appears to be directed to signals from the wireless unit, as denoted by the setting of the To-AP flag that normally denotes a transmission to the AP. Besides this lack of teaching, even if the CRC is construed as the first FCS, Applicants respectfully disagree that the first and second FCS are duplicate parts for a multiplied effect. *See page 3 of the Office Action.* Rather, the first frame check sequence is specifically placed to allow the receiver to confirm that the MAC header and other beacon information elements are received correctly, even if the test pattern contains error bits as denoted on page 9 of the Specification. This is used to prevent unnecessary retries, and thus, is not merely duplicative.

Therefore, since <u>Chesson</u> directs the nodes when to use a given carrier/timeslot to optimize slot assignments during a Contention Free Period only and <u>none</u> of the cited references describe or suggest the transmission of load balancing information with the modified beacon and do not provide motivation for the multiple frame check sequences as claimed, withdrawal of the outstanding §103(a) rejection as applied to independent claims 10 and 15 is requested.

Similarly with respect to independent claim 20, Applicants respectfully submit that a *prima facie* case of obviousness has not been established. For this claim, the load balancing information is placed in a *special data frame following the beacon and this data frame in order to reduce an amount of time required by a wireless unit in a power-save mode to remain powered-on to receive the data frame.* Emphasis added. In contrast, the combined teachings of <u>Beach</u> and <u>Chesson</u> teach a beacon with load assignment information as described above and assigned data slots assigned to a particular node for a given carrier. The combined teachings, however, do <u>not</u> teach or suggest the limitations of "logic to broadcast...the data frame being a first frame transmitted after broadcasting the special DTIM beacon" and "the data frame comprises at least one of a load balancing information and a test pattern." Rather, as the Examiner has pointed out, the data slots 528 are assigned for unicast transmissions (i.e. to a particular WU) and are not reserved for broadcast of a data frame as claimed.

Hence, withdrawal of the outstanding §103(a) rejection as applied to independent claim 20 is respectfully requested.

In addition, based on the dependency of claims 13-14, 16, 18-19, 22, 24 and 29 on independent claims 1, 15 and 20, believed by Applicants to be in condition for allowance, no further discussion as to the grounds for traverse is warranted. Applicants reserve the right to present such arguments in an Appeal is warranted. However, dependent claims 3, 6 , 13-14 and 16-17 have been further amended and reconsideration is respectfully requested.

Withdrawal of the §103(a) rejection as applied to claims 10, 12-16, 18-20, 22, 24 and 29 is respectfully requested.

B. §103 REJECTION OF CLAIMS 2-3, 5-8, 25-28, 30-32 AND 34

Claims 2-3, 5-8, 25-28, 30-32 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Beach in view of Chesson and a cited publication (Koutroubinas). Applicants respectfully traverse the rejection because a *prima facie* case of obviousness has not been established. In general, neither Beach, Chesson nor Koutroubinas, alone or in any combination, describes or suggests the invention as claimed.

With respect to independent claims 2 and 5, as an example, we agree with the Examiner that Beach does not specifically disclose a data frame being the first frame transmitted after the beacon. However, Applicants respectfully disagree with the allegations that Chesson "teaches a modified beacon method, and further teaches a data frame (e.g. in the data slot at 528 in Fig. 1) is a first frame transmitted after the beacon (e.g. overlaid start beacon 520, see Fig. 1 and paragraphs 0048-0069)."

As previously stated, Chesson refers to a defined time slot that exists only after a Point Coordination Function "PCF" type beacon. *See paragraphs 0047 and 0052 of Chesson*. In Chesson, any given slot time (the 528 elements) does not appear to be for use by the AP for broadcast purposes, but is assigned to one of the associated stations/ nodes or shared in time between several nodes including the controller node [AP]." *See paragraph 0048 of Chesson*. In contrast, the claimed invention is directed to transmissions of a beacon with a special indicator (bit) set by an AP. The AP then transmits a data frame *being a first frame transmitted after the beacon*. This data frame is a special data frame that contains *load balancing information for use by a wireless unit to determine whether to establish communications with the access point.* Emphasis added.

Moreover, Koutroubinas does not teach a beacon having a NAV value that is set to denote a transmission of a data frame after the special beacon. The passage reads "[e]very station in the network buffers its data and postpones any pending transmissions to the appropriate time instant, by setting its Network Allocation Vector (NAV) value." This passage cannot and should not be construed as teaching a special DTIM beacon that comprises "a field having a traffic indicator bit that is set to denote a transmission of a data frame after the DTIM beacon" where this data frame is the first frame broadcast by the access point after the beacon. Applicants believe that the NAV is not transmitted as part of the beacon per se, but is merely a vector stored by the wireless units to control transmission timing. As defined in IEEE 802.11 standard, the NAV is "an indicator, maintained by each station, of time periods when

transmission onto the wireless medium (WM) will not be initiated by the station whether or not the station's clear channel assessment (CCA) function senses that the WM is busy."

In addition, independent claim 5 features the limitation of broadcasting *the data frame*, which is the *first frame transmitted by the access point after the special DTIM beacon, in order to reduce an amount of time required by a wireless unit in a power-save mode to remain powered-on to receive the data frame.* Emphasis added. Even if the NAV can be interpreted as the indicator bit, the combined teachings of these references are not directed to the data frame being transmitted at this time so as to reduce the amount of time required by the wireless unit to be powered on.

Hence, withdrawal of the §103(a) rejection as applied to independent claims 2 and 5 should be withdrawn.

With respect to dependent claims 3, 6-8, 25-28, 30-32 and 34, Applicants respectfully submit that these claims are dependent on independent claims 2, 10 and 20, believed by Applicants to be in condition for allowance, no further discussion as to the grounds for traverse is warranted. Applicants reserve the right to present such arguments in an Appeal is warranted.

Therefore, withdrawal of the §103(a) rejection as applied to pending claims 2-3, 5-8, 25-28, 30-32 and 34 is respectfully requested.

C. §103 REJECTION OF CLAIM 17

Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Beach in view of Chesson and Coveley (U.S. Patent No. 5,548,821). Applicants respectfully traverse the rejection because a *prima facie* case of obviousness has not been established and incorporate the arguments set forth in claim 10 that the claim limitations of multiple frame check sequences is neither taught nor suggested by the cited references.

D. §103 REJECTION OF CLAIMS 4, 9, 11, 21 AND 23

Claims 4, 9, 11, 21 and 23 rejected under 35 U.S.C. §103(a) as being unpatentable over Beach in view of Chesson, Koutroubinas and Coveley. Applicants respectfully traverse the rejection because a *prima facie* case of obviousness has not been established.

First, with respect to claim 11, Applicants incorporate the arguments set forth in section (C) that multiple FCSs are not taught or suggested by the cited references and the arguments for allowance is presented above. Moreover, based on the dependency of claims 4, 9, 11, 21 and 23 on independent claims 2, 10 and 20, believed by Applicants to be in condition for allowance, no further discussion as to the grounds for traverse is warranted. Applicants reserve the right to present such arguments in an Appeal is warranted.

Withdrawal of the §103(a) rejection as applied to claims 4, 9, 11, 21 and 23 is respectfully requested.
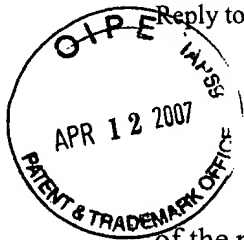
Conclusion

Applicant respectfully believes that all claims are in condition for allowance. Allowance of the pending claims is respectfully requested at the Examiner's earliest convenience.

Respectfully submitted,

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Dated: April 9, 2007   By_____

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